

TEMPORARY SEEDING Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed Seedbed preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened. Soil Amendments: Apply 600 lbs. per ocre 10-10-10 fertilizer (14 lbs /1000 Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushe per acre of annual rye (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well—anchored straw mulch, and seed as soon as possible in the spring, or use sod. Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal. per acre (8 gal./1000 sq. ft.) for anchoring. Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered. PERMANENT SEEDING NOTES Apply to graded or cleared areas not subject to immediate further disturbance where a permanent, long-lived vegetative cover is needed. Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened. Soil Amendments: Use one of the following schedules: 1) Preferred— Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper 3 inches of soil. At time of seeding apply 400 lbs. per acre 30-0-0 ureaform fertilizer(9 lbs./1000 sq. ft.). 2) Acceptable— Apply 2 tons per acre dolomitic limestone (92 lbs./1000sq. ft.) and 1000 lbs. per dore 10-10-10 fertilizer (23 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil. Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 60lbs, per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option 1- 2 tons per acre of well—anchored straw mulch, and seed as soon as possible in the spring. Option 2— Use sod. Option 3— Seed with 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw. gallons per acre (8 gal./1000 sq. ft.) for anchoring. Maintenance: Inspect all seeded areas, and make needed repairs, replacements,

Mulching: Apply 1 1/2 to 2 tons per acre (70-90 lbs./1000 sq. ft.) of un-rotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./100 sq. ft.)of emulsified asphalt or flat areas. On slopes 8 feet or higher, use 348

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
- All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. and revisions thereto.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the
- All sediment traps/basins shown must be fenced and warning signs posted round their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNT DESIGN MANUAL, Storm Drainage
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

Total Area of Site Areo Disturbed Area to be roofed or paved Total Cut

Area to be vegetatively stabilized Total Fill Offsite waste/borrow area location

4.56 acres 3.87 acres 1.03 acres 2.84 acres __<u>15130_</u> cu. yds. __<u>4660_</u> cu. yds. To be determined by contractor, with pre-approval of the Sediment Control

Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. Additional sediment controls must be provided, if deemed necessary by the

until this initial approval by the inspection agency is made.

- Howard County Sediment Control Inspector. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back—filled and stabilized within one working day, whichever is shorter.

grading. Other building or grading inspection approvals may not be authorized

DETAIL 8 - PIPE DUTLET SEDIMENT TRAP - ST I /2' HARDWARE CLOTH (WIRE) WITH TILTER CLOTH SECURELY FASTENED TO PERFORATED RISER ---EMBANKMENT OUT! FT PROTECTION -PERSPECTIVE VIEW TOP WIDTH -RIP-RAP PROTECTION RY STORAGE 4' MAXIMUM 18" MINIMUM THICKNESS DF 4'-12' III → II 10° MINIMUM LENGTH -- GEDTEXTILE CLASS 3 NOTE: RISER EMBEDDED 9' INTO CONCRETE OR 1/4' STEEL EMBANKMENT SECTION PLATE ATTACHED TO RISER THROUGH RISER WITH A CONTINUOUS WELD ON BOTTOM AND 2' OF STONE PLACED ON STEEL PLATE TWICE THE RISER DIAMETER Construction Specifications

- The area under the embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material, or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- The total trap volume as measured from the bottom to riser crest elevation shall be 3600 cubic feet per acre of drainage area (see Table 9). The top of embankment must be $\geq 1^\circ$ above the riser crest elevation.
- Sediment shall be removed and the trap restored to 1ts original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap (900cf/ac) The sediment shall be deposited in a sultable area and in
- such a manner that I t will not erode 5. The structure shall be inspected periodically and after each rain and repairs made as necessary MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE VATER MANAGEMENT ADMINISTRATION SQUIL CONSERVATION SERVICE

DETAIL 1 - EARTH DIKE

2:1 SLOPE OR FLATTER

CROSS SECTION

PLAN VIEW

FLOW CHANNEL STABILIZATION

Construction Specifications

2. Runoff diverted from a disturbed area shall be conveyed to a sediment

3. Runoff diverted from an undisturbed area shall outlet directly into an

4 All trees, brush, stumps, obstructions, and other objectional material

shall be removed and disposed of so as not to interfere with the proper

5. The dike shall be excavated or shaped to line, grade and cross section as

required to meet the criteria specified herein and be free of bank projections

7 All earth removed and not needed for construction shall be placed so that

8. Inspection and maintenance must be provided periodically and after

Clean out ex. sediment trap to original bottom if needed.

than 1' higher or 0.2' lower than the elevations shown on

this plan. The foundation footprint must be within the generic

5. Construct house. The first floor elevation cannot be more

6. Final lot grade to be in substantial conformance with site

shall inspect and provide the necessary maintenance on the sediment and erosion control measures shown

8. During grading and after each rainfall, the contracto

9. Following initial soil disturbance or redisturbance

development plan.
Sediment control inspector to approve the removal of traps on lots 25 and 50 prior to house construction.

permanent or temporary stabilization shall be complied

slopes and all slopes greater than 3:1.

approval of the sediment control inspector, remove all

10. Upon stabilization of all disturbed areas and with the

B. 14 calendar days for all other disturbed areas

A. 7 calendar days for all perimeter sediment control

structures, dikes, swales, ditch perimeter slopes

grade to an outlet. Spot elevations may be necessary for grades less than 1%.

Seed and cover with Erosion Control Matting or line with sod.

3. 4'' - 7'' stone or recycled concrete equivalent pressed into

1. All temporary earth dikes shall have uninterrupted positive

undisturbed, stabilized area at a non-erosive velocity.

or other irregularities which will impede normal flow.

6. Fill shall be compacted by earth moving equipment.

it will not interfere with the functioning of the dike.

SEQUENCE OF CONSTRUCTION

Notify Howard County Bureau Of Inspections and Permits (313-1880) at least 24 hours

Construct Stabilized Construction Entrance.

Install sediment control devices(cleanwater dike,

silt fence and pipe outlet sediment trap).

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

Obtain grading permit

before starting any work.

sediment control devices.

GRADE 0.5% MIN. 10% MAX.

SUFFICIENT TO DRAIN

REQUIRED FLOW WIDTH

a-DIKE HEIGHT

b-DIKE WIDTH

c-FLOW WIDTH

d-FLOW DEPTH

AT DESIGN FLOW DEPTH

DIKE A DIKE B

STANDARD SYMBOL

→ —/**→** —

A-2 B-3

36"

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

CUT OR FILL SLOPÉ

the soil 7" minimum

Seed and cover with straw mulch.

PIPE DUTLET SEDIMENT TRAP - ST I

6. Construction operations shall be carried out in such a manner that erosion and water pollution are abated. Brice constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure on terra. The remainder of the Interior slopes should be stabilized (one time) with seed and muich upon trap completion and monitored and maintained erosion free during the life of the trap

- 7. The structure shall be removed and area stabilized when the drainage area has been properly stabilized.
- 8 All cut and fill slopes shall be 2:1 or flatter

cloth shall be replaced as necessary to prevent clogging.

9. All pipe connections shall be watertight

on the plate

** GETTEXTILE CLASS 'C'-DR BETTER

LEXISTING GROUND

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels flow pH, material toxic to plants, and/or unacceptable soil gradation.

The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

The original spil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

or the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the place.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

This practice is limited to areas having 2:1 or flatter slopes where:

Placement of tapsoil over a prepared subsoil prior to establishment of permanent vegetation.

CONDITION WHERE PRACTICE APPLIES

10 Above the wet storage elevation, the riser shall be perforated with 1/2' wide by 6' long slits or 1' diameter holes spaced 6' vertically and horizontally No perforations will be allowed within 6° of the horizontal barrel

1. The riser shall be wrapped with 1/2° hardware cloth (wire) then wrapped with Geotextile Class E. The filter cloth shall extend 6' above the highest slit and 6' below the lowest slit. Where ends of filter cloth come together, they shall be overlapped, folded and fastened to prevent bypass Filter

12 Straps or connecting bands shall be used to hold the filter cloth and wire fabrec in place. They shall be placed at the top and bottom of the cloth [3.] Fill material around the pipe spillway shall be hand compacted in $4^{\prime\prime}$

layers. A minimum of 2' of hand-compacted backfill shall be placed over the plipe spill way before crossing it with construction equipment 14. The riser shall be anchored with either a concrete base or steel plate base to prevent flotation. Concrete bases shall be at least twice the riser diameter and 12^{\prime} deep with the riser embedded 9^{\prime} . Steel plate bases shall be at least twice the riser diameter, 1/4' minimum thickness and attached to the bottom of the riser by a continuous weld to form a watertlight connection. Then place 2' of stone, gravel or tamped earth

- 15. Anti seep collars shall be constructed in accordance with plans (ref table 16 and Details 13 and 14).
- 16 Concentric trash rack and anti-vortex device design details are on Detail 16 17 Refer to Section I for dewatering requirements of sediment traps. 18. Dutlet - An outlet shall be provided, which includes a means of conveying

the discharge in an erosion free manner to an existing stable channel 19. Where discharge occurs at the property line, local ordinances and drainage

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

PROFILE

MINIMUM 6' DF 2'-3' AGGREGATE

OVER LENGTH AND WIDTH OF STRUCTURE

— * 50′ MINIMUM------

LENGTH

Construction Specification

. Width $\sim 10^\circ$ minimum, should be flared at the existing road to provide a turning

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior

to placing stone. **The plan approval authority may not require single family:

4. Stone - crushed aggregate (2° to 3°) or reclaimed or recycled concrete

equivalent shall be placed at least 6' deep over the length and width of the

5 Surface Water - all surface water flowing to or diverted toward construction

has no drainage to convey a pipe will not be necessary. Pipe should be sized

entrances shall be piped through the entrance, maintaining positive drainage. Pipe

mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has

to be sized according to the drainage. When the SCE is located at a high spot and

installed through the stabilized construction or trance shall be protected with a

according to the amount of runoff to be conveyed. A 6' minimum will be required

6. Location - A stabilized construction entrance shall be located at every point

where construction traffic enters or leaves a construction site. Vehicles leaving

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the site must travel over the entire length of the stabilized construction entrance

Length - minimum of 50' (*30' for single residence lot)

MARYLAND DEPARTMENT OF ENVIRONMEN

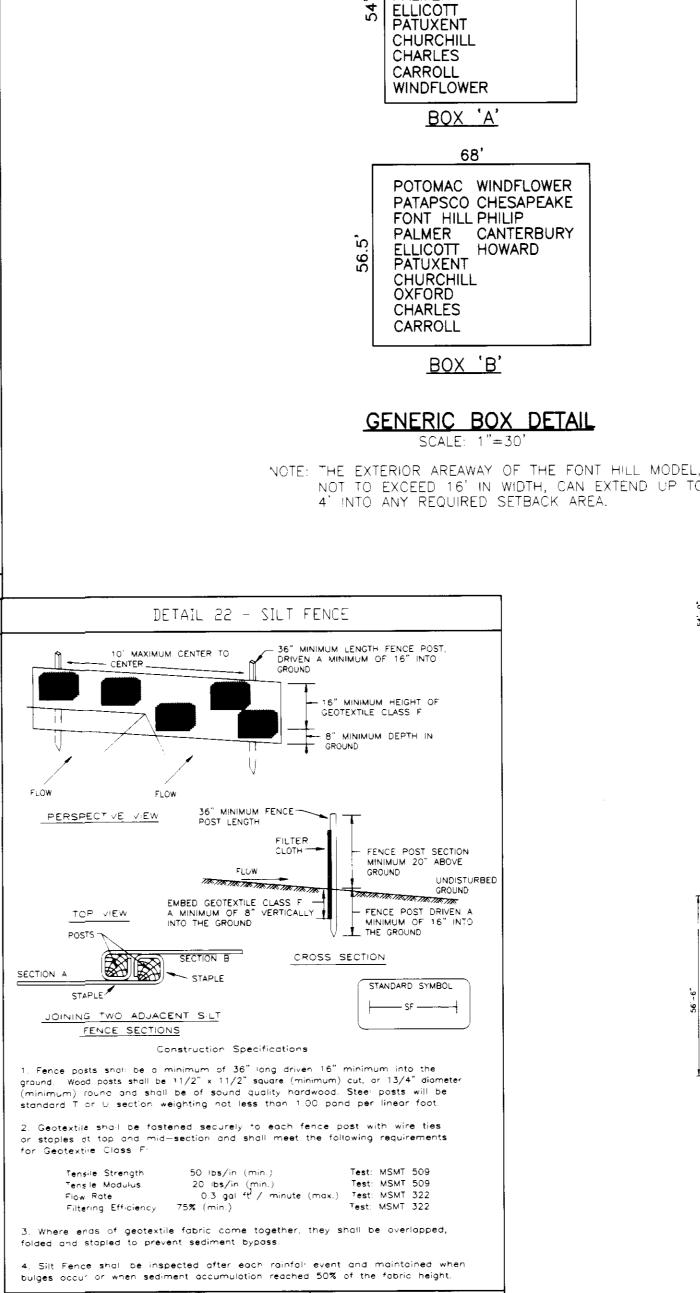
VATER MANAGEMENT ADMINISTRATION

BERM (6' MIN)

EARTH FILE

PIPE AS NECESSARY

XISTING PAVEMENT



60'

POTOMAC

PATAPSCO

FONT HILL

PALMER

MARYLAND DEPARTMENT OF ENVIRONMENT VATER MANAGEMENT ADMINISTRATION

SDIL CONSERVATION SERVICE

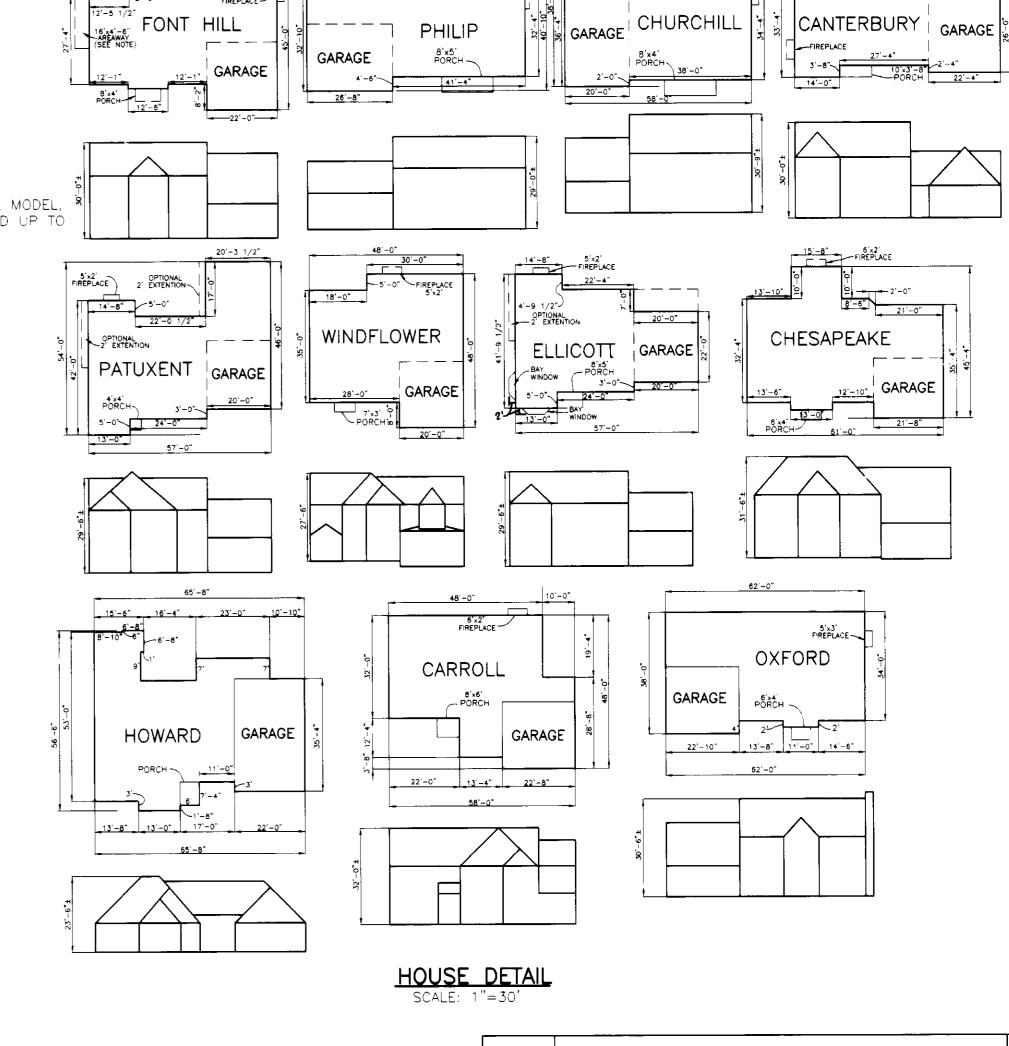
For sites having disturbed areas over 5 acres: On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

- a. ph for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient time shall be prescribed to raise the pH to 6.5 or higher.

 b. Organic content of topsoil shall not be less than 1.5 percent by weight.
- c. Topsoil having soluble soit content greater than 500 parts per million shall not be used. d No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
- Place a tapsoil ('f required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section Vegetative Stabilization Methods and Materials.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4 8 higher in elevation.

THE BUNNEY DEVELOPMENT ENGINEERING DIVISION '

SUBDIVISION NAME PARCEL NUMBER SECTION/AREA SECTION 3 LITTLE PATUXENT RIDGE 228 CENSUS TR 6023.01 2ND 15



CHARLES --

∠PORCH

PALMER

GARAGE

REVISION LITTLE PATUXENT RIDGE SECTION 3, LOTS 25 - 30 & 46 - 50 DETAIL SHEET REFERENCE: F-95-134 TAX MAP #24 BLOCK #14 PARCEL 228

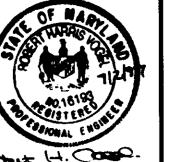
PATAPSCO

5'x4'PORCH 52'-0" 20'-4"

MARKS & VOGEL ASSOCIATES, INC.

ENGINEERS - SURVEYORS - PLANNERS TELEPHONE: (410) 461-5828 FAX: (410) 465-3966 3691 PARK AVENUE, SUITE 101

ELLICOTT CITY, MARYLAND 21043



2ND ELECTION DISTRICT

DESIGN BY: R.H.V. DRAWN BY: J.C.D. CHECKED BY: R.H.V. DATE: MAY, 1997 SCALE: 1"=30"

W.O. NO.: 97-09

ENGINEERS CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

-Kalut 14.000 SIGNATURE OF ENGINEER ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDING TO THIS PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

PAGE MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE

A - 1 - 6 VATER MANAGEMENT ADMINISTRATION SDIL CONSERVATION SERVICE

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

MARYLAND DEPARTMENT OF ENVIRONMENT

VATER MANAGEMENT ADMINISTRATION

CONSTRUCTION AND MATERIAL SPECIFICATIONS

Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be solvaged for a given soil type can be found in the representative sail profile section in the Soil Survey published by USDA—SCS in concertains with Manager

Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 in diameter

Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison vy, thistle, or others as specified

II. For sites having disturbed areas under 5 acres:

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4—8 tons/acre (200—400 pounds, per 1,000 square feet) prior to the placement of topsail. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization — Section I — Vegetative Stabilization Methods and Material.

Topsoil Specifications — Soil to be used as topsoi must meet the following:

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL

CONSERVATION DISTRICT. DATE HOWARD SOIL CONSERVATION DISTRICT

PLAT NO.S BLOCK NO. ZONE TAX/ZONE ELECT. DIST. 5850000 WATER CODE SEWER CODE

OWNER/DEVELOPER

FEAGA HOMES

P.O. BOX 1309

410-312-0482

ELLICOTT CITY, MARYLAND 21041

SHEET 3

HOWARD COUNTY, MARYLAND